

#4

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## SEQUENCE LISTING

<10> Robl, James M.  
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Tomizuka, Kazuma  
Ishida, Isao

<120> Expression of Xenogenous (Human)  
Immunoglobulins in Cloned, Transgenic Ungulates

<130> 50195/008003

<140> US 09/988,115

<141> 2001-11-16

<150> US 60/311,625

<151> 2001-08-09

<150> US 60/256,458

<151> 2000-12-20

<150> US 09/714,185

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<150> US 60/166,410

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ttgataaaat gcacctgaga caaattaatt tcttaaacat cgactttgaa aatgaatata 240  
agtgagcagt tgataggctc tgaatgaaat accttccaac aggtgctgag aaccgccagg 300  
agcaggggaac ggactccccg tggagcccca gaaggagcca gccctgatga tacctcggcc 360  
ctgggcccctc ctcacgctgg gagagagcca gctcctgttg ttcattgctg gectgtggtt 420  
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cccagggtct cctctcccat cccaccgccc accctaccct ggcgttgccg tcacagctaa 840  
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gccccaaagc accaccgcg cgtggcgcca ctggcctggg aggagacaca tgtccctttc 1380  
ccatcagcaa tgggttcagc actaggatat gcagcacaca ggagtgtggc ttgggggtaa 1440  
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cccaggcccc	gctgactgcc	gccccaccgg	gcacctctct	aatccccccag	ctagtagtgt	3060
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 tcatacatta gtagtagtgg tagtaccata tactacgcag actctgtgaa gggccgattc 180  
 accatctcca gggacaacgc caagaactca ctgtatctgc aaatgaacag cctgagagcc 240  
 gaggacacgg ctgtgtatta ctgtgcgaga ataactgggg atgcttttga tatctggggc 300  
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 Pro Gly Lys Gly Leu Glu Trp Val Ser Tyr Ile Ser Ser Gly Ser  
 35 40 45  
 Thr Ile Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg  
 50 55 60  
 Asp Asn Ala Lys Asn Ser Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala  
 65 70 75 80  
 Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Ile Thr Gly Asp Ala Phe  
 85 90 95  
 Asp Ile Trp Gly Gln Gly Thr Met Val Thr Val Ser Ser Gly Ser Ala  
 100 105 110

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Asp Thr Ser  
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ctggagtggg tgacagttat atggtatgac ggaagtaatc aatactatat agactccgtg 180  
aagggccgat tcaccatctc cagagacaat tccaagaaca tgttgatatc gcaaataaac 240  
agcctgagag ccgaggatac ggctgtgtat tactgtgcga gagatcgcaa tggcctgaag 300  
tacttcgata tctggggccg tggcacccctg gtactgtct catcaggag tgcacccg 360  
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35 40 45  
Tyr Asp Gly Ser Asn Gln Tyr Tyr Ile Asp Ser Val Lys Gly Arg Phe  
50 55 60  
Thr Ile Ser Arg Asp Asn Ser Lys Asn Met Leu Tyr Leu Gln Met Asn  
65 70 75 80  
Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Asp Arg  
85 90 95  
Asn Gly Leu Lys Tyr Phe Asp Leu Trp Gly Arg Gly Thr Leu Val Thr  
100 105 110  
Val Ser Ser Gly Ser Ala Ser Ala Pro Thr Leu Phe Pro Leu Val Ser  
115 120 125  
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Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu Ile Tyr Arg Asn Asn  
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Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Lys Ser Gly  
65 70 75 80  
Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Arg Ser Glu Asp Glu Ala  
85 90 95  
Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu Ser Gly Leu Phe Gly  
100 105 110  
Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro Lys Ala Ala Pro Ser  
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Gly Gln Thr Val Arg Ile Thr Cys Gln Gly Asp Ser Leu Arg Ser Tyr  
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Tyr Ala Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val  
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Ala	Glu	Asp	Glu	Ala	Asp	Tyr	Tyr	Cys	Asn	Ser	Arg	Asp	Ser	Ser	Gly
			100					105					110		
Asn	His	Val	Val	Phe	Gly	Gly	Gly	Thr	Lys	Leu	Thr	Val	Leu	Gly	Gln
		115					120					125			
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